BACKGROUND
The large chondroitin sulfate proteoglycan, aggrecan, is the predominant proteoglycan present in cartilage. Aggrecan is a member of the chondroitin sulphate proteoglycan family, which also includes versican/PG-M, neurocan and brevican. Aggrecan is a complex multidomain macromolecule that undergoes extensive processing and post-translational modification. In cartilage, aggrecan forms aggregates with hyaluronan and link protein, embedded in a collagen network. Aggrecan accounts for the compressive stiffness and resilience of the hyaline cartilage. Many forms of inflammatory arthritis are shown to be accompanied with aggrecan degradation and loss from the cartilage.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: AGC1 (human) mapping to 15q26.

SOURCE
aggrecan (3H525) is a mouse monoclonal antibody raised against human articular cartilage aggrecan.

STORAGE
Store at 4° C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS
aggrecan (3H525) is recommended for detection of aggrecan of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)), immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for aggrecan siRNA (h): sc-41897.

Molecular Weight of aggrecan: 200 kDa.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2033 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA
aggrecan (3H525): sc-70332. Western blot analysis of aggrecan expression in human articular cartilage predigested with chondroitinase ABC, keratanase I and endo-β-galactosidase. Kindly provided by Dr. Roberto Perris, University of Parma, Italy.

aggrecan (3H525): sc-70332. Immunoperoxidase staining of formalin fixed, paraffin-embedded human soft tissue showing cytoplasmic staining in chondrocytes at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

RESEARCH USE
For research use only, not for use in diagnostic procedures.

PRODUCT
Each vial contains 200 µg IgG₁ in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.